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THE LEADER BEHAVIOR OF ELEMENTARY SCHOOL PRINCIPALS IN WESTERN AUSTRALIAN SCHOOLS AND ITS RELATIONSHIP TO EFFECTIVENESS

by

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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Leader Behavior of Elementary School Principals in Western Australian Schools and its Relationship to Effectiveness" submitted by Alfred Neil Stewart in partial fulfillment of the requirements for the degree of Master of Education.

ABSTRACT

This study was an attempt to relate two dimensions of leader behavior of school principals to estimates of effectiveness. Subjects of the investigation were thirty-two elementary school principals in the metropolitan and submetropolitan areas of Perth, Western Australia.

The instrument used to obtain principals' leader behavior scores was the Leader Behavior Description Questionnaire which measured two dimensions of leader behavior; Consideration and Initiating Structure. The Prince Rating Scale of Effectiveness was used to obtain teacher ratings of principal effectiveness, and superintendent ratings of effectiveness were obtained from the principals who reported the numerical assessment given annually to all principals by superintendents in Western Australia. Teachers and principals also completed a questionnaire giving personal data.

All data from the questionnaires were transferred to IBM punch cards and a computer was used to calculate Pearson Product-Moment correlations and Spearman coefficients of rank correlation. Five hypotheses were tested.

The investigation revealed significant relationships between the scores obtained by those principals who were rated as most effective by district superintendents and scores above the mean on the dimension of Initiating Structure. In the case of teacher estimates of effectiveness, the scores

obtained by principals who were rated most effective showed no significant relationship with above mean scores on either of the dimensions of Initiating Structure and Consideration.

Superintendents' ratings of principal effectiveness correlated significantly with scores on the dimension of Initiating Structure but no significant relationship was found with scores on the dimension of Consideration. Teachers estimates of effectiveness, however, correlated significantly with scores on each of the dimensions of Initiating Structure and Consideration.

A Spearman coefficient of rank correlation calculated between teacher estimates of principal effectiveness and superintendent ratings of effectiveness was found to be significant in a positive direction.

The results show that in their assessment of effectiveness, superintendents place emphasis on those behaviors associated with the dimension of Initiating Structure to the exclusion of those with the dimension of Consideration. Teachers, however, view behaviors on both dimensions to be important but place a greater emphasis on Consideration.

Testing showed that the sample of elementary school principals drawn from the metropolitan area of Perth, was representative of the total population of Western Australian elementary school principals.

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CHAPTER I

THE PROBLEM

I. INTRODUCTION

The forms, problems, techniques and goals of leadership in the field of education are matters that have been and will continue to be the subject of much research, debate and opinion. Of specific interest is the position of the school principal. Downey states:

> A new image of the principal is emerging -- an image that places the principal in a relationship to the school as a whole, as the superintendent is to the district, or as the teacher is to the classroom. Today, the principal is expected to be the educational leader of his school. He is expected to assume authority over and responsibility for every activity in which his school engages.[1]

Reeves, in discussing the position of the principal suggests that this new image has come about because of the expansion of cities, the development of large rural administrative units and the increasing complexity of operation and size of schools. The principal has assumed a more significant position from that of full time teacher whose tasks involved the clerical and disciplinary matters of the school to that

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[1] L. W. Downey, "The Skills of an Effective Principal," The Canadian Administrator, 1:11, December, 1961.

of instructional leader.[2]

As the leader of the school the principal has two important functions. The first involves the achievement of the educational goals of the school, and the second is concerned with the maintenance of dynamic and harmonious relationships with and between the staff members to ensure high levels of teacher satisfaction and morale. In large measure his effectiveness will be determined by the degree to which he can achieve these. Miklos, in discussing school climate and program development emphasizes the importance of effective leadership within the school:

> Without leadership there can be no more than potential for adequate program development; ... the behavior of any group will be as effective as the leadership which is available to it.[3]

Chase, discussing factors for satisfaction in teaching,[4] states that dynamic and stimulating leadership by principals is high in importance for teacher satisfaction and that the feelings of teachers with regard to the quality of professional leadership and supervision are related towards their feelings towards the system as a whole. There is also evidence to

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[2]A. W. Reeves, "The Role of the Principal," The Canadian School Principal, (Canada, McClelland & Stewart Ltd., 1962), p. 34.

[3]E. Miklos, "School Climate and Program Development," The Canadian Administrator, 4:27, April, 1965.

[4]F. S. Chase, "Factors for Satisfaction in Teaching," Phi Delta Kappan, 33:128, November, 1951.

suggest that the type and style of leadership is related to pupil productivity. Mackay, in discussing the relationship of leader behavior to pupil growth and achievement states:

> Where authority relationships are of the bureaucratic type, teacher satisfaction with the organization is significantly reduced. This reduction in satisfaction negatively affects teacher performance with a resulting decrease in pupil growth and achievement.[5]

Ziolkowski, in a recent study of practices in supervision of instruction, has demonstrated that the success of supervision within a school and system is related to the leadership behavior. Regarding the effects of leadership upon the school he says:

> It would appear that a school which promotes teacher growth is likely to be associated with a principal who is perceived to be (a) a person showing consideration and understanding, (b) an example of industry and efficiency, (c) a leader adequately representing the group's needs and interests, and (d) an agent of change.[6]

The position of principal involves a great measure of responsibility and a corresponding degree of skill in the human, technical, managerial and speculative-creative aspects of teaching and learning. The ability to ascertain the skills that are necessary for an effective principal and to describe the behavior that characterizes the successful school

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[5]D. A. Mackay, "Should Schools be Bureaucratic," The Canadian Administrator, 4:7, November, 1964.

[6]E. H. Ziolkowski, "Practices in the Supervision of Instruction," The Canadian Administrator, 5:4, October, 1965.

principal are most necessary. Mackay has called the principalship "one of the important articulation points in school organization."[7] Because of this, the selection and training of principals should be a matter of vital concern to those who direct the course of public education.

II. STATEMENT OF THE PROBLEM

This study examined the leader behavior of elementary school principals in Western Australia. It sought to determine whether there was any relationship between teacher description of leader behavior and ratings of effectiveness given by district superintendents, and by teachers.

Specifically, the problem was stated: Is the leader behavior of elementary school principals as indicated by the Leader Behavior Description Questionnaire related to the numerical assessment of effectiveness given by Western Australian superintendents, and to estimates of effectiveness given by members of the teaching staff?

In connection with this problem the study sought to discover whether the ratings given by superintendents and those given by teachers were more closely related to some leader behavior scores than others. The study also aimed to

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[7] D. A. Mackay, "The Principalship: A Pivotal Role in Communication," in The Tasks of the Principal, F. Enns, ed. Edmonton: The Policy Committee, Leadership Course for School Principals, 1963, p. 31.

investigate whether there was any significant relationship between teacher estimates of principal effectiveness and superintendent ratings of principal effectiveness.

III. SIGNIFICANCE OF THE PROBLEM

Education in Western Australia is under the control and direction of a central government department located in the capital city, Perth. In this highly centralized system, supervision and evaluation of schools and teaching staffs are the responsibility of district superintendents who are members of the state public service and who are usually recruited from the ranks of successful principals. The duties and functions of superintendents according to the Education Act of 1928, and its amendments prior to the third of December, 1960, are set out as follows:

> (a) To advise and assist teachers, and make themselves available when possible for consultation and discussion.
>
> (b) To evaluate the work of the school as an educational institution and to indicate whether it is adequately meeting departmental requirements either as a whole or in particular fields of instruction and,
>
> (c) To assess the efficiency of departmental teachers using the terms prescribed in regulation 153 of these regulations.[8]

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[8]Education Department of Western Australia, Regulations 1960, Regulation 146, Section 1, p. 48.

The state of Western Australia is divided into twelve elementary school districts, each of which is under the control of a district superintendent of education. Six of these school districts are located in the metropolitan area of Perth, and in 1966 two of the country districts, Murchison and Central, and the Lower Great Southern, will have two superintendents attached to them, one of whom will be designated as officer in charge. This is a preliminary step to the future establishment of regional directors of education, which will decentralize to some extent, the control now exercised by the central office.

Included among the tasks of the district superintendent is the annual inspection of all schools within his district. At the completion of the annual inspection visit the district superintendent prepares a written report upon all aspects of school activity. This written report is handed to the principal of the school who retains a copy for the school file and forwards the original to the central office. In addition to the school report the superintendent gives to each principal a written, individual report consisting of the following categories:

(a) Directing Influence.

(b) Control.

(c) Teaching Skill.

(d) Organizing Capacity.[9]

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[9] Ibid., reg. 153, p. 49.

To each of these categories is assigned a verbal assessment. The assessment is given by use of the following terms, which are in ascending order of merit:

> Weak; weak to fair; fair; fair to very fair; very fair; very fair to good; good; good to very good; very good; very good to excellent; excellent.[10]

Table I indicates verbal assessments and their numerical equivalents. The verbal assessment given by the superintendent is translated to a numerical assessment for the purposes of calculating promotional opportunity. This numerical assessment is cumulative and reference is always made to prior total before any new mark is given. Any rise in mark is an indication of increased effectiveness and it is possible to have a reduction of marks if the superintendent considers that the principal's efficiency has declined. Regulation 158 of the Western Australian Education Department Regulations states that if two assessments of less than seventy in successive reports concerning a principal are received, then that principal is liable to have his classification reduced or his services terminated.[11]

Because of the cumulative nature of this assessment, little if any consideration is given to the various categories in the assignment of the mark, for it is determined beforehand

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[10] Ibid., Set 88, No. b, p. 24.

[11] Ibid., Regulation 158, p. 50.

TABLE I

VERBAL ASSESSMENTS AND NUMERICAL EQUIVALENTS

Verbal Assessment	Directing Influence	Control	Teaching Skill	Organizing Capacity
Weak	10	10	10	10
Weak to Fair	12	11	11	11
Fair	14	12	12	12
Fair to Very Fair	16	13	13	13
Very Fair	18	14	14	14
Very Fair to Good	21	15½	15½	15½
Good	24	17	17	17
Good to Very Good	26	18	18	18
Very Good	28	19	19	19
Very Good to Excellent	29	19½	19½	19½
Excellent	30	20	20	20

and then assignment of marks to each category is manipulated to arrive at this predetermined mark.

For promotion within the service, promotion lists of eligible principals are drawn up each year and assignment to these lists, which are made up in order of precedence, is determined by reference to basic qualifications, length of service and teaching mark. Elementary schools in Western Australia are divided into five classes according to annual average attendance. These are as follows:

Class 1A	being schools having an average attendance of over six hundred pupils.
Class 1	being schools having an average attendance of over three hundred but not over six hundred pupils.
Class 2	being schools having an average attendance of over one hundred and twenty but not over three hundred pupils.
Class 3	being schools having an average attendance of over thirty but not over one hundred and twenty pupils.
Class 4	being schools having an average attendance of thirty or less than thirty pupils.[12]

Promotion to class four and three schools requires possession of a Teachers' Certificate. For promotion to a class two, one or one A school, the Teachers' Higher Certificate is required.[13] In addition to these basic

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[12] Ibid., Regulation 167, p.152.

[13] Ibid., Regulation 169, p. 53.

qualifications the principal must have an average mark of eighty-one in the four years preceding the compilation of the promotion lists. Once promoted from the promotion list for the grade of school for which he is eligible, a principal is eligible to have his name included in the promotion list for the next grade of school after two years satisfactory service in the grade of school to which he has been promoted.

In practice a maximum of ninety is never given and so the effective range of marks for principals is between eighty-one and eighty-nine. By regulation, the central department can fill every third vacancy that occurs in a school by the appointment of a principal irrespective of the position of his name on the promotion list, regard being paid to ability, qualifications and efficiency. Principals who have attained a mark of eighty-eight or eighty-nine are usually considered for this special promotion.[14]

Dissatisfaction from both principals and Departmental officers has been voiced with the numerical assessment mainly because of its subjective nature. Despite proposals to replace the numerical assessment by one which is wholly verbal, no agreement has been possible between the Western Australian Teachers' Union and the Education Department due mainly to considerations of priorities for promotion. It

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[14] Ibid., Regulation 99, p. 30.

is hoped that this study will be able to provide some evidence of the validity and reliability of the existing numerical system of principal effectiveness.

IV. ASSUMPTIONS

The effective range of teaching marks for principals of schools is between eighty-one and eighty-nine. By regulation, a mark of eighty-one is required for promotion to the position of principal. For the purposes of this study, principals with marks of eighty-nine were considered to be those who were most effective. Those with marks below eighty-nine were considered to be lower in effectiveness.

It was considered that the single 1965 rating of principals by superintendents indicated adequately the level of principal effectiveness.

V. STATEMENT OF HYPOTHESES

The following hypotheses were tested in this study:

(1) Those principals rated most effective by superintendents will obtain scores above the means for both dimensions of Initiating Structure and Consideration.

(2) Superintendents' ratings of principal effectiveness will correlate significantly with scores on the dimensions of Initiating Structure and Consideration but the correlation for Initiating Structure will be higher than that for Consideration.

(3) Those principals rated most effective by teachers will obtain scores above the mean for both dimensions of Initiating Structure and Consideration.

(4) Teachers' ratings of principal effectiveness will correlate significantly with scores on Initiating Structure and Consideration but the correlation for Consideration will be higher than that for Initiating Structure.

(5) There will be a significant relationship between the scores on teacher estimates of principal effectiveness and the numerical assessment of principal effectiveness given by district superintendents.

VI. DEFINITION OF TERMS

Initiation of Structure

This refers to the principal's behavior in delineating the relationship between himself and the members of the staff, and in endeavouring to establish well defined patterns of organization, channels of communication and ways of getting the job done.

Consideration

Consideration refers to behavior that pays regard to the comfort, well being, status and contributions of followers.

CHAPTER II

REVIEW OF RELATED LITERATURE

> As we survey the path leadership theory has taken we spot the wreckage of 'trait' theory, the 'great man theory,' the situationist critique, leadership styles, functional leadership and finally leaderless leadership; to say nothing of bureaucratic leadership, charismatic leadership, group centered leadership, democratic-autocratic-laissez-faire leadership, reality centered leadership, leadership by adjective and so on.[1]

In this way Warren G. Bennis describes the multitude of approaches to the question of leadership. He states that "of all the hazy and confounding areas of social psychology, leadership theory undoubtedly contends for top nomination."[2] He sets forth an account of the evolution of administrative theory and practice against which it is possible to discern the origins, structure and definitions of leadership. Attempts to define principal leadership find their source in these varying interpretations.

I. LEADERSHIP: THEMES AND ASSUMPTIONS

Bennis has outlined three broad stages in the development of administrative theory and practice. The scientific

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[1]Warren G. Bennis, "Leadership Theory and Administrative Behavior: The Problems of Authority," Administrative Science Quarterly, 4:260, December, 1959.

[2]Ibid., p. 263.

management and bureaucracy stage which Bennis terms "organizations without people"[3] has identified with it the names of Frederick W. Taylor, Max Weber, Urwick, Gulick, Haldane and others. This classical organizational theory considered man as"too base or too unpredictable to consider and viewed power as springing from forces out of the control of the organization's members."[4] To these people man was subordinate to the considerations of organization. In their view organization should be rationally planned and executed and obedience and authority found their source in forces exogenous to the organization.

The second phase, the Human Relations approach, or "people without organizations,"[5] was characterized by the plant sociology of Mayo, the psychological studies of Freud and the pivotal concerns of Kurt Lewin, the client centered therapy of Carl Rogers and by writings of men such as Moreno, Homans, Arensburg, Chapple and White. The metapsychological assumptions of Carl Rogers illustrate well the skeletal structure upon which the human relations approach was built:

(1) Every individual exists in a continually changing world of which he is the centre.

(2) The organism has one basic tendency and striving to actualize, maintain and enhance the experiencing organism.

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[3] Ibid., p. 265.

[4] Ibid., p. 265.

[5] Ibid.

(3) The organism reacts to the field as it is experienced and perceived. This perceptual field is for the individual, reality.

(4) The best vantage point for understanding behavior is from the internal frame of reference of the individual himself.[6]

Bennis presents nine non-independent factors which represent a first approximation to the human relations approach:

(1) Leadership and authority as emergent factors. Designated status and predetermined formal organization structure appear to be eclipsed by a free floating functional leadership, which emerges and varies as group needs vary.

(2) Organization as an organism rather than a machine, a holistic apparatus rather than the atomistic model portrayed by the earlier organizational theorists.

(3) The group rather than the individual, as the focus.

(4) Unanticipated consequences rather than over-determined system which thus hampers prediction.

(5) Power stems from norms, reinforced by the group and emerging over time, rather than from exogenously induced rules.

(6) Similarity of interests between superior and subordinate insofar as these categories exist.

(7) The doctorine of implied consent instead of external incentives.

(8) The role of the leader, insofar as he is formally designated, consists of co-ordinating and transacting relations among group members and of being responsible for the personal growth and development of his membership. He should be

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[6] Ibid., p. 269.

affectively neutral insofar as his own needs are concerned.

(9) The fallibility of external reality and cognition in favour of a motivationally based theory of internal reality. At best this is a form of consensual validation wherein group members establish social reality by anchoring their judgments in some reference group.[7]

The third, or revisionist stage, is characterized by attempts to reconcile the traditional and modern concepts of organizational theory. Influenced by new research findings, the recognition of reality factors and change of zeitgiest, these writers are concerned with revising the naive, unsubstantiated and unrealistic aspects of the Human Relations approach without sacrificing its radical departure from traditional theory. Bennis identifies three broad phases in this development, the first of which is characterized by the work of Robert McMurry. McMurry adopts a Weberian model of organization and concludes that a "benevolent autocracy" is needed. Bennis describes this movement:

> Benevolent autocracy ... gets its results because it rigidly structures, routinizes and controls the relations of the supervisors to their subordinates. The typical bureaucrat is incapable of conceiving of applying sound leadership principles on his own initiative. Where it has been tried, it works. It is a method for making the best of the worst.[8]

The second phase of this revisionist stage Bennis

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[7] Ibid., p. 272.

[8] Ibid., p. 275.

designates as the Fusion Process: The Aristocratic Utopian Resolution.[9] Associated with this movement is the work of Chris Argyris who analyses "what appears to be the quintessential problem of organizational behavior, a problem with enormous motivational, ethical and scientific consequences -- the relation between the individual and the organization."[10] Bennis summarizes the work of Argyris as follows:

> Human beings in our culture share tendencies to develop from a state of passivity, from dependence to independence, from rigidity to flexibility of behavior, from shallow interests to enduring interests, from short time perspective to long time perspective, from a subordinate position to a peer or superior position, from lack of awareness to greater awareness and control of self. The implication is that the formal organization is but one of the factors that contributes to the truncation and stultification of these growth tendencies ... this means that healthy adults will tend to obtain optimum personality expression while at work if they are provided with jobs which permit them to realize their growth tendencies.[11]

The third phase of this revisionist stage, that of the management by objectives and the double reference, has as its key figure, Douglas McGregor, who recognizes that "the most central principle of conventional organizational theory is that of authority."[12] His work stresses

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[9] Ibid., p. 276.

[10] Ibid.

[11] Ibid., pp. 280-281.

[12] Ibid., p. 283.

"collaborative relationships between superior and subordinate and secondly, reality task considerations that focus on the work requirements."[13]

II. THE DEFINITION OF LEADERSHIP

Attempts to define "a leader" and to describe "leadership" closely parallel the stages of organizational behavior suggested by Bennis. Speaking of the definition of leadership E. E. Jennings says:

> Our modern concept of leadership is most difficult to entertain for any length of time. Inevitably we become bogged down in such interminable questions as what constitutes leadership, is leadership personality or fate? What constitutes social change and progress?[14]

This opinion is shared by Hemphill who states that "one of the first sources of confusion in an attempt to understand leadership lies in the very definition of the term."[15]

There have been many attempts to define leadership. One group sought to contrast leadership with other individual characteristics. This approach assumed that certain qualities were located in the leader and that distinctive ways of acting or personality characteristics tended to recur. Gouldner

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[13] Ibid.

[14] E. E. Jennings, An Anatomy of Leadership (New York: Russell and Russell Inc., 1960), p. 16.

[15] A. W. Gouldner, Studies in Leadership (New York: Russell and Russell Inc., 1960), p. 16.

discusses two classifications of the traits approach: Classifications of traits analyses of leadership in terms of the method of study used; and the relationship that is assumed to exist between the traits of leaders and the group or situational context.[16] Bird suggested about seventy-nine leadership traits.[17] Miller says self control, assiduity, common sense, judgment justice, enthusiasm, perseverance, tact, courage, faith, loyalty and other traits as being characteristic of outstanding military leaders,[18] and Bogardus proposed universal traits of imagination, foresight, flexibility, versatility and inhibition.[19] Others such as Terman, Reaney, Nutting, Rohnback, Bellingrath, Marion Brown, Bennett, Jones and McCuen also followed this approach. Pigors saw the leader as one who directs and educates while a dominator manipulates. To him leadership was a process of "mutual stimulation which by the successful interplay of relevant individual differences, controls human energy in the pursuit of a common cause."[20] Krout saw the two extremities

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[16] Ibid., p. 21.

[17] Ibid.

[18] Ibid., p. 21.

[19] Ibid.

[20] P. Pigors, Leadership or Domination (New York: Harper Bros, 1960), p. 16.

of leadership and followship while Jennings contrasted leadership and isolation.[21] These trait approaches which sought to define characteristics independent of position have proved unfruitful in research. Gouldner suggests five inadequacies of the trait approach in leadership. These are summarized as follows:

(1) Those proposing trait lists do not indicate the degree of importance of individual traits.

(2) Many traits are not mutually exclusive.

(3) There is no discrimination between traits which facilitate ascent to leadership and those enabling it to be maintained.

(4) Trait studies are largely descriptive and do not indicate how traits develop or how behavior became organized.

(5) The study of leader personalities in terms of traits involves certain debatable assumptions regarding the nature of personality.[22]

Another approach sought to define leadership not by a series of identifiable, isolated traits but through identification with the situation. Such approaches reject the possession of unique universal traits as attributes of leadership, nor will they accept status as a criterion. They suggest that traits do not exist in general but vary from situation to situation and from group to group.[23]

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[21] J. K. Hemphill, Situational Factors in Leadership (Columbus: The Ohio State University, 1948), p. 3.

[22] Gouldner, op. cit., pp. 23-24.

[23] Ibid., p. 25.

Success in a given situation will be determined by possession of defined skills, and any lack of these will limit opportunity for leadership exclusively in terms of the personal qualities of the leader. Those who adopted the situationist approach saw it exclusively in terms of the social situation. The situationist approach was supported by the results of research. If, however, this approach were adopted there would be little that could be said about the quality of leadership as such in an abstract sense, hence leaders could not be trained. Even among the reports of situationists, however, it is possible to detect the presence of opinion that suggests that there are universal traits to be found in every leadership situation. Brown writes: "it would be absurd to deny that two factors of a semibiological nature are important in leadership, probably the most important is intelligence."[24] Jennings also reports the occurrence of certain constant characteristics in her studies:

> In the population so large as that of the test community the varieties of leadership are manifold. Nevertheless in personality a number of characteristics of leaders stand out as common attributes.[25]

The traits theory failed to lead anywhere and the situationist theory, although it was supported by research

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[24] Ibid., p. 31.

[25] Ibid.

prevented the making of generalizations about leadership. The development of a larger theory which could explain how both personal qualities and social situations interact to produce leadership and which could allow for the common sense notion that leaders do have the same characteristics and, at the same time, allow for the unique needs of the situation came about from research in the field of sociology.[26] The theory of Social Role, or as it is often referred to, the Structuralist-Functionalist theory, helped to resolve the dilemma by showing the presence of common needs in groups and such being the case there would be a need for common personal traits in leadership to satisfy these needs and a set of unique traits to fulfil the unique group needs.

In discussing leadership, Cartwright and Zander state two objectives of groups as being the achievement of some specific goal and the maintenance or strengthening of the group itself.[27] Any given behavior in a group may have significance both for goal achievement and for group maintenance. Thus leaders of any group among other specific functionings must direct their behavior towards the attainment of such needs. Cartwright and Zander assert that leadership is not necessarily equated with status:

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[26]J. H. M. Andrews, "Recent Research in Leadership," Canadian Education, 13:15-24, September, 1958.

[27]D. Cartwright, and A. F. Zander, Group Dynamics (London: Tavistock Publications, 1954), p. 541.

> If one person does devote unusually great effort towards this end (i.e., goal achievement) or if he is especially effective in aiding the group, it would generally be agreed that he is performing functions of leadership regardless of his office in the group.[28]

Leadership, in Cartwright and Zander's view, therefore, consists of certain universal characteristics which must be supplemented depending on the situation. Hemphill has summarized this by stating that "a definition of leadership must include both the characteristics of a social situation and the characteristics of an individual,"[29] and he defines leadership as the behavior of an individual while he is involved in directing group activities.

III. THE STUDY OF ORGANIZATIONAL LEADERSHIP

The assertions of Cartwright and Zander with regard to leadership have been well substantiated by research. In this regard the findings of the Ohio Leadership Studies are most significant. These studies grew out of an original hypothesis "that performance in a position of leadership is determined in large part by demands made upon the position."[30] Hemphill, in his studies of situational factors in leadership

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[28] Ibid., p. 542.

[29] Hemphill, op. cit., p. 96.

[30] R. M. Stogdill and A. E. Coons, Leader Behavior: Its Description and Measurement (Columbus: The Ohio State University, 1957), p.1.

identified as important areas for study, behavior of the individual and the group with which the individual interacts and identified three factors of importance in the study of leadership. These are, "the behavior of an individual, the social situation in which he functions and the judgment of adequacy."[31] Where earlier studies of leadership had placed an almost exclusive emphasis on the personal characteristics of the leader, Hemphill endeavoured to study systematically the characteristics of group situations in their relation to the behavior of leaders. Hemphill was not the first to recognize the importance of factors in the social situation but previous attempts to study this aspect of leadership had been ineffective due to a lack of any means of systematically describing the group.

By a process of extraction of common factors, Hemphill and his associates were able to abstract from the work of various writers fifteen group dimensions for use in their study of situational factors in leadership. These factors were size of group, viscidity, homogeneity, flexibility, permeability, polarization, stability, intimacy, autonomy, control, position, potency, hedonic tone, participation and dependency.[32] The first ten of these dimensions refer

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[31]Hemphill, op. cit., p. 96.

[32]Hemphill, op. cit., pp. 32-33.

mainly to the group as a unit while the final five are concerned with the leader's relation with the group.

As regards the measurement of the adequacy of leadership, Hemphill selected as a criterion "the sum of two ratings of the leader's leadership quality. Of this criterion Hemphill relates:

> This criterion was found to be related to ratings of morale of the group, its effectiveness and the respondents personal acceptance of the leader as an individual. Upon the basis of the criterion score, two categories of leadership adequacy were established, high leaders making up 73 per cent of those described; and low leaders the remaining 27 per cent.[33]

The most significant relationship between the fifteen stated dimensions and the leadership adequacy were with viscidity which showed a correlation of .52 and hedonic tone which showed a correlation of .51.

An examination of the leader behavior items and leadership adequacy without reference to the nature of the group demonstrated that the leader will exhibit behavior that indicates his ability to advance group purpose and to motivate the members towards greater activity. It was found that behavior items which had been traditionally associated with leadership were often not significantly associated with leadership adequacy. When behavior was compared with each of the group dimension items it was found that the behavior

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[33] Ibid.

which was associated with being an adequate group leader correlated highly with hedonic tone and viscidity, indicating that one of the major functions of group maintenance is to sustain membership satisfaction and cohesion. Hemphill has summarized the conclusions as follows:

> (1) An exploratory study of leadership has led to the formation of numerous hypotheses for further investigation.
>
> (2) A system of group dimensions has made it possible to discover significant relations between factors in the group and the behavior of the leaders.
>
> (3) The questionnaire has proved a useful tool in a study of group phenomena in which a large amount of information had to be gathered from many sources.
>
> (4) A situational approach to this study of leadership has yielded additional insight into the functions of individuals in a leadership role.[34]

A study of the problems of how a leader goes about what he does rather than what he does led to the development of the Leader Behavior Description Questionnaire. Given direction by the work of Hemphill and working on the definition that leadership is the behavior of an individual when he is directing the activities of a group towards a shared goal, the staff of the Personnel Research Board of the Ohio State University developed a questionnaire, the purpose of which was to discover what behavior leaders consistently exhibit.

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[34] Stogdill and Coons, op. cit., p. 37.

In the development of the questionnaire 1790 items were constructed of which one hundred and fifty were selected and redefined to correspond as closely as possible to the dimensions of Initiation, membership, representation, integration, organization, domination, communication, recognition and production. The questionnaire was initially administered to three hundred and fifty-seven individuals, two hundred and five of whom described a leader of a group in which they were members or had recently been members, while one hundred and fifty-two described themselves as leaders. Extensive analysis of results revealed three major ways of accomplishing the leadership job:

(1) A leader may stress being a socially acceptable individual in his interaction with other group members.

(2) A leader may stress getting the job done.

(3) A leader may stress making it possible for members of a group or organization to work together.[35]

In a study sponsored jointly by the Human Resources Research Laboratories Department of the United States Air Force, and the Ohio State University Research Foundation, Andrew Halpin and James Winer studied Air Force personnel manning bombardment aircraft. They administered a L.B.D.Q. consisting of one hundred and thirty items. Factor analysis

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[35]Stogdill and Coons, op. cit., p. 37.

of the intercorrelations among eight hypothesized dimensions resulted in the emergence of the factors of consideration, initiating structure, production emphasis and social awareness. Of these four, consideration and initiating structure were found to account for eighty-three per cent of the total factor variance. From the study it was found that "consideration tends to be correlated negatively with leadership effectiveness ratings of superiors, while initiating structure is positively related to effectiveness ratings."[36] Consideration was more highly related as an index of crew satisfaction than was initiating structure.

Most of the development work on the L.B.D.Q. has been related to studies of aircraft commanders in the U.S.A.F. Fleishman and Bass have used the instrument to describe the leader behavior in industry and Hemphill and Halpin have adapted it for use in the field of education.

In a study designed to determine the relationship between a leader's ideal and his actual leadership behavior as observed by his subordinates, Halpin[37] found that the consideration behavior of educational administrators is described as relatively independent of their initiating structure behavior and that a leader's beliefs about how he

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[36] Ibid., p. 51.

[37] Ibid., p. 65.

should behave as a leader are not highly associated with his behavior as described by his followers. Similar results were obtained by Hemphill who, in a study of eighteen departments of a liberal arts college within a moderately large university, in which departmental heads were described by members, using the L.B.D.Q. found that departments which had a high reputation were those whose chairmen scored high on both leader behavior dimensions of Initiating Structure and Consideration.[38]

Halpin, in examining the findings of early research using the L.B.D.Q. has found six principal findings. These may be summarized as follows:

(1) Evidence indicates that Initiating Structure and Consideration are fundamental dimensions of leader behavior.

(2) Effective leader behavior is associated with high performance on both dimensions.

(3) Superiors are more concerned with Initiating Structure aspects of the leader's behavior, whereas the subordinates are more concerned with consideration the leader extends to them as group members.

(4) High Initiating Structure combined with high Consideration is associated with favourable attitudes and with favourable changes in group attitudes.

(5) There is only a slight positive relationship between the way leaders believe they should behave and the way in which their group members describe them as behaving.

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[38] Ibid., p. 74.

(6) The institutional setting within which the leader operates influences his leadership style.[39]

IV. RESEARCH AT THE UNIVERSITY OF ALBERTA USING THE L.B.D.Q.

The subject of leader behavior has received some attention in theses presented by graduates in the Department of Educational Administration at the University of Alberta. These studies have involved the treatment of problems involving the school principal and his relations with the school staff and pupils, and with the classroom teacher and teaching effectiveness.

In 1959, P. J. Warren carried out an investigation into the leadership expectations of the principal in Newfoundland's regional and central high schools as perceived by principals and staffs. The primary purpose of this study "was to ascertain the relationship between the expectations of school principals and teachers in Newfoundland's regional and central high schools for the principal's leadership role."[40] Using a modified form of the Leader Behavior Description Questionnaire, Warren found, inter alia, that

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[39] A. W. Halpin, The Leadership Behavior of School Superintendents (Columbus: The Ohio State University, 1956), pp. 22-23.

[40] P. J. Warren, "Leadership Expectations of the Principal in Newfoundland's Regional and Central High Schools as Perceived by Principals and Staffs" (unpublished Master's thesis, the University of Alberta, Edmonton, 1959), p. ii.

there was no significant difference between principal and teacher expectations on each of the leadership dimensions of Consideration and Initiating Structure.

Another study carried out in 1959 by McBeath entitled "Teacher Leader Behavior and Its Relation to Teacher Effectiveness" used the L.B.D.Q. to describe teachers' leader behavior and a global scale to give a single rating of teaching effectiveness.[41] McBeath reached the conclusion that the most effective teachers were those who were described as being above average on consideration and initiating structure. The least effective teachers were those who were described as being below average on both dimensions of leader behavior. Students also related effective teaching to both consideration and initiating structure dimensions of behavior. There was a tendency for consideration behavior to be more closely related to ratings of effectiveness. Administrators related effective teaching to both consideration and initiating structure but neither dimension was more closely related to ratings of effectiveness.

In a 1963 study of Staff Characteristics and Principal Leadership"[42] D. V. Morris tested the hypothesis that the leader behavior of school principals was related to certain

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[41]A. G. McBeath, "Teacher Leader Behavior and Its Relation to Teacher Effectiveness" (unpublished Master's thesis, The University of Alberta, Edmonton, 1959).

[42]D. V. Morris, "Staff Characteristics and Principal Effectiveness" (unpublished Master's thesis, The University of Alberta, Edmonton, 1963).

major social characteristics of their teaching staffs. This general hypothesis that staff characteristics and principal behavior were interrelated was generally supported and amongst other things there was considerable evidence to support the contention that staffs whose principals were high in initiating structure and consideration were less flexible than staffs whose principals were low in these two dimensions.

R. G. Fast, in a study entitled, "Leader Behavior of Principals as it Relates to Teacher Satisfaction"[43] attempted to relate two dimensions of leader behavior of school principals to teacher satisfaction using the L.B.D.Q. and the Meyers Satisfaction Scale. By subtracting perceived and expected scores on the L.B.D.Q. he was able to obtain congruence scores. His investigation revealed that there was a highly significant relationship between the teachers' satisfaction and the teachers' perceptions of leader behavior and also between joint perceptions and expectations and satisfaction. His study indicated that there was no significant relationship between teachers' expectations, leader behavior and teacher satisfaction. However, teachers whose perceptions and expectations were in close agreement tended to rate themselves higher in satisfaction

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[43]R. G. Fast, "Leader Behavior of Principals as it Relates to Teacher Satisfaction" (unpublished Master's thesis, University of Alberta, Edmonton, 1964).

than did those teachers whose perceptions and expectations differed. From the point of view of leader behavior, Fast found that the dimension of consideration as measured by the L.B.D.Q. was more closely related to teacher satisfaction than was initiating structure.

The work carried out in 1961 by T. B. Greenfield[44] sought to relate leader behavior to pupil growth within specific theories of leadership and teacher effectiveness. In general, this study showed that principals, other teachers and students are able to reach significant agreement about leader behavior of classroom teachers and that teacher leader behavior is significantly related to pupil growth.

V. CONCLUSIONS

Research in leadership has been closely related to theories of the nature of leadership. The Traits Theory and the Situationist Theory represented, as it were, two extremes; the former stated that leadership was not related to the situation but was concerned only with the person. The latter took the opposite view and stated that leadership was a product of the situation and had little to do with the person. Recent research, however, based upon the Theory of Social Role views leadership as a function both of the leader's behavior and the situation in which he operates.

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[44] T. B. Greenfield, "Teacher Leader Behavior and Its Relation to Effectiveness as Measured by Pupil Growth" (unpublished Master's thesis, The University of Alberta, Edmonton, 1961).

CHAPTER III

INSTRUMENTATION AND METHODOLOGY

I. DESCRIPTION OF SAMPLE

This study was confined to a sample of fifty class one A, class one and class two elementary school principals located in the metropolitan and submetropolitan areas of Perth, Western Australia.

The selection of class one and class two principals was made because of the nature of the promotional system in Western Australian schools. It was assumed that the principals of these elementary schools in Perth, because of their greater length of service, would have achieved their maximum level of effectiveness and that this level would not be expected to alter significantly with future assessments.

The useable sample for this study included one hundred and seventy-four teachers from thirty-two schools. The number of participants from each school varied from four to six. Variation in the number of participants from each school was due in some measure to the nature of the schools. Class two schools, being schools having an average attendance of over one hundred and twenty but not over three hundred pupils, have staff numbers which can vary in number from four to over ten. In some cases, therefore, it was necessary to accept responses from only four staff members. Table II

below, summarizes responses from the various schools that comprised the sample.

TABLE II

SUMMARY OF RESPONSES FROM SCHOOLS IN THE SAMPLE

Number of useable questionnaires	32
Number of questionnaires not returned	9
Number of questionnaires not useable	9
TOTAL	50

The teaching experience of principals in the sample ranged from thirteen to forty-one years which indicated that all principals in the sample had had relatively long experience in elementary schools in the state. Of the thirty-two principals participating in the study, over forty per cent had had thirty or more years of experience and thirty-two per cent had had over twenty years. Due to the nature of the promotion system in Western Australian elementary schools, where seniority is one of the variables affecting promotion it was to be expected that the principal of class one A and class one elementary schools in the metropolitan area of Perth would have had teaching experience in excess of twenty years.

Table III represents the distribution of principals in the sample by years of teaching experience.

TABLE III

YEARS OF TEACHING EXPERIENCE FOR PRINCIPALS

Class of School	10-20 yrs	20-30 yrs	30 yrs +	Total
1A	1	2	4	7
1	2	8	5	15
2	6	0	4	10
Totals	9	10	13	32

Table IV represents the distribution of teaching marks for the population of Western Australian elementary school principals and for principals in the sample.

The distribution of teaching marks for the total population was obtained from the Western Australian Education Department. The distribution of teaching marks in the sample and in the population show a very negatively skewed distribution. Of the one hundred and thirty-eight schools in the population, one hundred and eleven principals have marks of eighty-eight or above. In the sample, out of the thirty-two schools, thirty principals have marks of eighty-eight or above.

A test of independence involving the use of Chi Square was applied to the data in this table and a Chi Square value of 2.06 was obtained. This value was not significant at the 0.05 level. The sample may, therefore, be considered as representative of the population of Western Australian elementary school principals.

TABLE IV

TEACHING MARKS FOR POPULATION AND SAMPLE

	Teaching Marks								
	81	82	83	84	85	86	87	88	89
Population	1	0	0	0	4	3	19	31	80
Sample	0	0	0	0	0	1	1	10	20

II. INSTRUMENTATION

The Leader Behavior Description Questionnaire

In order to obtain staff descriptions of leader behavior, the Leader Behavior Description Questionnaire, developed by the Ohio State University, was administered to six members of each school staff in the study. In a few cases, in class two schools, where average pupil attendance varied from one hundred and twenty to three hundred, staff numbers did not permit responses from six members. In these

cases a minimum of four responses was accepted. Halpin has indicated that a minimum of four respondents is acceptable. In the manual to the Leader Behavior Description Questionnaire he states:

> Experience suggests that a minimum of four respondents is desirable, and that additional respondents beyond ten do not increase significantly the stability of the index scores. Six or seven respondents per leader would be a good standard.[1]

The Leader Behavior Description Questionnaire measured the dimensions of Initiating Structure and Consideration and its validity and reliability have been well tested by research.[2]

The Prince Rating Scale of Effectiveness

This scale was adapted from that used by Prince[3] who constructed it by submitting a list of twenty-one items to a panel of competent judges who selected those items which they considered would best judge the effectiveness of a principal. The scale contains ten items with five responses for each. To this scale, Prince added a global rating scale

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[1]A. W. Halpin, Manual for the Leader Behavior Description Questionnaire (Columbus: The Ohio State University, 1957), p. 7.

[2]Descriptions of research using the L.B.D.Q. are reported in R. M. Stogdill and A. E. Coons, Leader Behavior: Its Description and Measurement. (Columbus: The Ohio State University, 1957).

[3]R. Prince, "A Study of the Relationship Between Individual Values and Administrative Effectiveness in the School Situation" (unpublished Doctoral dissertation, University of Chicago, 1957.)

consisting of five items which assessed the effectiveness of a principal in terms of comparison with other principals known to the respondents. This global scale was not used in the treatment of data as it was considered that sections A and B of the scale were independent measures and that section A, consisting of ten items would provide less likelihood of the error of central tendency. For the treatment of hypotheses section A was used in all correlations.

The Principal's Questionnaire

A questionnaire seeking demographic data was administered to all principals in the sample. This questionnaire consisted of the following five items:

(1) The grade of school.

(2) Length of time in the present position.

(3) Number of years of teaching experience.

(4) Current teaching mark.

(5) Qualifications.

Principals were asked to check appropriate responses for each of the above categories. In the case of the teaching mark, principals were asked to supply their 1965 rating.

The Teacher Questionnaire

This questionnaire sought demographic information about the teacher respondents in the sample. It sought the following information:

(1) Length of service in the present school.

(2) Years of teaching experience.

(3) Present qualifications.

III. COLLECTION OF DATA

Permission to carry out this study was obtained from the Director General of Education of the Western Australian Education Department.

Because of the necessity to affix Australian postage to return envelopes, all materials for this study were sent to an agent in Western Australia who distributed the materials to the schools. The completed questionnaires were returned to this agent who returned the unopened questionnaires to Canada at the end of each week. In order to expedite delivery and return of questionnaires, consignment was made by air. Individual follow-up letters were sent by air mail from Canada and telephone calls and personal visits to schools were made by the agent in order to obtain a maximum number of respondents.

The design of the research required teachers to complete the following:

(1) A questionnaire on personal data.

(2) The Leader Behavior Description Questionnaire describing their principal's behavior as accurately as possible.

(3) A questionnaire rating the effectiveness of their principal.

Thus it was essential to assure each teacher that the information that was given would remain completely anonymous. In order to have teachers feel more confident, the instructions asked that no teacher should write his name on the questionnaire. In two cases, school staffs declined to participate in the study because the writer was a member of the Western Australian Education Department. In two others, the staff members declined because they considered that the questionnaires required information that was much too personal.

IV. STATISTICAL TREATMENT OF DATA

The Leader Behavior Description Questionnaire

The Leader Behavior Description Questionnaire was administered to six members in each school. In some cases, in class two schools, due to low staff numbers, responses as low as four were accepted. In order to obtain scores for each dimension, the means of scores of all teacher responses for each school were taken for each of the dimensions of Initiating Structure and Consideration. For each dimension of the Leader Behavior Description Questionnaire the individual scores were obtained according to the manual.

Teachers' Effectiveness Rating Scale

This scale was composed of two sections, A and B. In

section A, the letters A, B, C, D and E carried values of 5, 4, 3, 2, and 1 respectively. For section A, the maximum possible total was fifty and minimum ten. In section B there was a choice of five item answers. Items 1, 2, 3, 4, and 5 carried values of 5, 4, 3, 2, and 1 respectively so that the values for a rating in this section ranged from one to five.

As outlined above (supra p. 39) in the testing of hypotheses, scores from section A were used in all testing.

Relationship between the Superintendents' Ratings and Scores on the Dimensions of the Leader Behavior Description Questionnaire

Chi Square was used to establish the relationship between the superintendents' ratings and the dimensions of the Leader Behavior Description Questionnaire. In the case of superintendents' ratings, those principals who scored eighty-nine were considered to be higher in effectiveness and those scoring below eighty-nine were considered to be lower in effectiveness.

Relationship between Leader Behavior Scores and the Superintendents' Teaching Marks

To establish the relationships between the dimension scores of the Leader Behavior Description Questionnaire and the superintendents' numerical ratings of principal effectiveness the Spearman Coefficient of Rank Correlation was used.

The Spearman Coefficient of Rank Correlation was used

because of the extremely skewed distribution of principals' teaching marks which did not allow the assumption of normality to be met.

Relationship between Effectiveness Ratings of Principals and Scores on the Dimensions of Leader Behavior

On teacher ratings of principal effectiveness those principals who obtained scores in the supper quartile were considered to be higher in effectiveness. Those principals who scored in the lower quartile were considered to be lower in effectiveness. Chi Square was used to determine the relationship between those principals higher and lower in effectiveness on the teacher ratings and those who scored above and below the means on the dimensions of Initiating Structure and Consideration.

Relationships between Leader Behavior Scores and Teacher Ratings of Effectiveness

In order to establish the relationship between the dimension scores of the Leader Behavior Description Questionnaire and teacher ratings of principal effectiveness the Pearson Product Moment Correlation Coefficient was used.

Congruence of Teacher and Superintendent Estimates of Principal Effectiveness

In order to obtain a measure of congruence between teacher estimates of principal effectiveness and superin-

tendent ratings of effectiveness the Spearman Coefficient of Rank Correlation was used.

CHAPTER IV

TREATMENT OF HYPOTHESES

I. INTRODUCTION

The major purpose of the study was to investigate the leader behavior of elementary school principals in Western Australia, to determine the relationship of this behavior to estimates of effectiveness given by teachers and to a numerical assessment of effectiveness given annually by district superintendents. In Chapter II, hypotheses were developed from an analysis of the problems and sub-problems. Hypotheses one and two were concerned with the effort to establish the relationship between superintendent ratings of effectiveness and the dimensions of Initiating Structure and Consideration. Hypotheses three and four sought to determine the relationship between teacher estimates of effectiveness and the same two dimensions, and hypothesis five sought to establish whether there was a positive relationship between superintendent and teacher ratings of effectiveness. In the present chapter, the hypotheses are stated, the method of testing described and the results provided.

The statistical procedures adopted to establish relationships between teacher ratings of effectiveness, superintendents' teaching marks and the dimensions of Initiating Structure and Consideration have been outlined in

Chapter III of this study. The critical level of significance for all correlations in this study was set *a priori* at 0.05 (one tailed).

II. DIMENSIONS OF LEADER BEHAVIOR AS THEY RELATE TO SUPERINTENDENT RATINGS OF EFFECTIVENESS

In this section, the relationships between superintendent ratings of effectiveness and scores on the dimensions of Initiating Structure and Consideration are examined.

Leader Behavior Scores

In Chapter III of this study, reference was made to the Leader Behavior Description Questionnaire and its purpose in this study. Teachers were asked to complete this form describing as accurately as possible the leader behavior of their principal. Table V indicates the distribution of scores for the dimensions of Initiating Structure and Consideration and of teaching marks for principals in the sample. The number of descriptions per principal ranged from four to six. For each of the thirty-two principals, the scores by which teachers described their principal's leadership behavior were averaged for each of the two dimensions. These teacher mean scores were treated as the Consideration and Initiating Structure scores ascribed to the thirty-two principals by their respective staffs. The mean Consideration score was found to

TABLE V

INITIATING STRUCTURE, CONSIDERATION AND TEACHING MARK SCORES FOR PRINCIPALS IN SAMPLE

School	IS	C	TM
1	49.25	52.25	88.0
2	38.75	48.50	88.0
3	44.40	54.80	88.0
4	42.60	45.60	86.0
5	40.75	50.25	87.0
6	45.60	52.40	88.0
7	55.00	49.25	89.0
8	44.00	53.50	89.0
9	49.66	36.17	89.0
10	41.00	38.00	89.0
11	44.00	52.60	89.0
12	48.83	44.00	89.0
13	46.75	44.75	89.0
14	43.66	44.50	89.0
15	40.00	54.83	89.0
16	45.00	44.25	89.0
17	38.17	34.33	89.0
18	46.50	43.33	89.0
19	43.60	53.60	89.0
20	46.00	46.25	89.0
21	51.20	61.60	89.0
22	31.66	40.83	88.0
23	51.40	53.80	89.0
24	44.00	52.83	88.0
25	43.00	54.20	89.0
26	46.60	53.40	89.0
27	50.17	45.00	89.0
28	36.50	49.50	88.0
29	43.66	53.33	88.0
30	44.00	52.17	88.0
31	45.80	46.40	89.0
32	50.00	53.40	89.0

be 48.4 with a standard deviation of 5.59; the mean Initiating Structure score, 44.7 with a standard deviation of 4.70. The correlation between these two sets of ascribed scores was 0.189.

The Superintendents' Teaching Marks

Reference has been made to the numerical assessment by which the effectiveness of principals in Western Australia is measured each year. (Supra. pp. 6-7). The effective range of teaching marks for elementary school principals is from eighty-one to eighty-nine, eighty-one being the teaching mark required for promotion within the service. Table VI represents the distribution of teaching marks for the population of Western Australian elementary school principals. An examination of the table reveals that of the one hundred and thirty-eight principals reported in this table, one hundred and thirty-three have teaching marks between eighty-six and eighty-nine. Table VII represents the distribution of teaching marks for principals in the sample. Reference has been made to the fact that a Chi Square test shows this sample to be representative of the population of elementary school principals in Western Australia. (Supra. p. 37).

Testing of Hypothesis I

This hypothesis stated:

> Those principals rated most effective by superintendents will obtain scores above the means for both dimension of Initiating Structure and Consideration.

TABLE VI

TEACHING MARKS FOR POPULATION

Teaching Mark	81	82	83	84	85	86	87	88	89	Total
Frequency	1	0	0	0	4	3	19	31	80	138

TABLE VII

TEACHING MARKS FOR SAMPLE

Teaching Mark	81	82	83	84	85	86	87	88	89	Total
Frequency	0	0	0	0	0	1	1	10	20	32

Table VIII, below, illustrates the distribution of principals scoring above and below the mean for the dimension of Initiating Structure and who reported teaching marks of eighty-nine or below for superintendent ratings of effectiveness.

TABLE VIII*

ABOVE AND BELOW MEAN SCORES ON INITIATING STRUCTURE AND HIGH AND LOW SUPERINTENDENT RATINGS

Teaching Mark	Initiating Structure	
	Below X	Above X
89 Mark	8	13
Below 89 Mark	9	2

* -- 3.86 required for significance at the 0.05 level.

A Chi Square calculated from this table was found to be 3.92, which was found to be significant at the 0.05 level.

From the results of the above testing it may be concluded that there is a significant positive relationship, at the 0.05 level, between higher and lower ratings of effectiveness given by superintendents, and above and below mean scores on the dimension of Initiating Structure, as hypothesized.

Table IX, below, indicated the distribution of

principals who scored above and below the mean for the dimension of Consideration on the Leader Behavior Description Questionnaire, and who reported teaching marks of eighty-nine or below for the superintendents' ratings.

TABLE IX*

ABOVE AND BELOW MEAN SCORES ON CONSIDERATION AND HIGH AND LOW SUPERINTENDENT RATINGS

Teaching Mark	Consideration	
	Below X	Above X
89 Mark	11	10
Below 89 Mark	2	9

* -- 3.84 required for significance at the 0.05 level.

A Chi Square calculated from this table was found to be 2.22, which did not meet the value required for significance at the 0.05 level.

From the results of the above testing it may be concluded that there was no significant relationship between higher and lower ratings of effectiveness on superintendents' ratings and above and below mean scores on the leader behavior dimension of Consideration.

Discussion. In the testing of this hypothesis it was established that there was a correlation, significant at the

0.05 level, between higher and lower ratings of effectiveness given by superintendents and above and below mean scores on the dimension of Initiating Structure. In the case of the dimension of Consideration, no significant relationship was established.

These findings support the hypothesis in one aspect only. It was hypothesized that the principals rated most effective by superintendents would be those scoring above the means of both leader behavior dimensions of Initiating Structure and Consideration. The hypothesis was supported only with respect to the dimension of Initiating Structure.

These findings suggest that district superintendents in Western Australia, in their assessment of effectiveness, tend to rate as most effective those principals who show a high degree of Initiating Structure behavior. The behaviors associated with the dimension of Consideration do not appear to have any influence upon superintendents' ratings of those principals whom they perceive to be most effective. The principal, whom the staff perceives to be behaving in a manner which is strongly directed towards the achievement of group goals and who effectively fulfills Departmental expectations of his role, is the one who will receive the highest ratings of effectiveness.

Testing of Hypothesis II

This hypothesis stated:

> Superintendent ratings of principal effectiveness will correlate significantly with scores on Initiating Structure and Consideration but will be higher for Initiating Structure.

Superintendent ratings of principal effectiveness and scores on the dimensions of Initiating Structure and Consideration are listed in Table V (supra p. 47).

A Spearman Coefficient of Rank Correlation calculated between superintendent ratings of effectiveness and the dimension of Initiating Structure was found to be 0.428 which was significant at the 0.05 level.

A Spearman Coefficient of Rank Correlation calculated between scores on the dimension of Consideration and superintendent ratings of effectiveness was found to be -0.109. This was not significant at the 0.05 level.

Discussion. The results of the above testing support the hypothesis in two aspects only. A correlation, significant at the 0.05 level, was found between superintendent ratings of effectiveness and scores on the dimension of Initiating Structure, but teaching marks correlated negatively with the scores on the dimension of Consideration. The correlation between teaching marks and Consideration was not significant at the 0.05 level. The hypothesis was further supported in that the correlation between teaching marks and Initiating

Structure was higher than that between teaching marks and Consideration scores.

Initiating Structure can be viewed as a measure of the degree to which the principal of a school is successful in fulfilling Departmental expectations of his role. The implication is that in their assessment of principal effectiveness, superintendents pay little regard to the degree to which a principal is responsive to his staff in terms of their interpersonal needs but concentrates solely on those behaviors which indicate that he is fulfilling the institutionally established requirements of his role.

III. DIMENSIONS OF LEADER BEHAVIOR AS THEY RELATE TO TEACHER RATINGS OF EFFECTIVENESS

In this section the relationship between the teacher ratings of principal effectiveness and the scores obtained on the leader Behavior Description Questionnaire dimensions of Initiating Structure and Consideration are investigated. More specifically, the relationships tested are those present in hypotheses 3 and 4 in Chapter One of this study.

Hypotheses 3 and 4 stated in connection with teacher ratings of effectiveness and scores on the dimensions of Initiating Structure and Consideration were as follows:

> 3. Those principals rated as most effective by teachers will obtain scores above the mean for both dimensions of Initiating Structure and Consideration.

4. Teacher ratings of principal effectiveness will correlate significantly with scores in Initiating Structure and Consideration but will be higher for Consideration.

Scores on the Prince Rating Scale

In Chapter Three, reference was made to the Prince Effectiveness rating scale and its purpose in this study. Teachers were asked to complete this form rating as accurately as possible the effectiveness of their principal. Table X indicates the distribution of scores for principals on this rating scale. The scores ranged from a low of 31.83 for school twenty-two, to a high of forty-nine for school eight. The mean score for all principals in the sample was found to be 42.11. The number of ratings per principal in the sample ranged from four to six, with a mean of 5.75. For each of the principals, the scores by which teachers rated their principal's effectiveness on Section A of the rating scale, were averaged. These teacher mean scores for Section A were treated as the effectiveness scores ascribed to the principals by their respective staffs. Teacher mean scores were similarly calculated for Section B of the scale. In the analysis of data for the testing of hypotheses, scores from Section A were used. Scores obtained from Section B of the scale were used as a means of checking the reliability of the Section A scores. The correlation between ascribed scores on Section A and Section B of the rating scale was found to be 0.668.

TABLE X

SCORES OBTAINED FOR EACH PRINCIPAL ON THE PRINCE RATING SCALE OF EFFECTIVENESS

School	Rating
1	39.25
2	41.00
3	45.40
4	40.83
5	40.25
6	41.50
7	48.00
8	49.00
9	41.17
10	42.17
11	48.66
12	42.50
13	35.40
14	39.00
15	45.00
16	40.60
17	35.50
18	42.00
19	43.00
20	43.40
21	44.40
22	31.83
23	44.83
24	44.50
25	42.00
26	43.00
27	42.66
28	33.00
29	43.33
30	44.17
31	45.00
32	45.17

Table XI is a correlational matrix of the ten items of the Prince Rating Scale with total scores on Sections A and B of this scale and with scores on the dimensions of Initiating Structure and Consideration. For Section A of the rating scale, all ten items of the scale correlated highly with the overall scores for the total test. Correlations on all items were significant at the 0.01 level with Section A scores. For Section A of the scale, all items except number one, "Working with parents and community groups", and number eight, "Encouraging the use of pertinent instructional materials and aids", correlated significantly at the 0.05 level with scores on Section B of the scale. The correlation between Section A and Section B scores was 0.668, which was significant at the 0.01 level.

Table XII represents the results of a regression analysis carried out on individual item scores of the test with overall scores. This analysis was carried out with twenty-three of the total thirty-two schools in the sample. This analysis reveals that item two, which deals with the degree to which the principal helps teachers to solve their problems, accounts for 88.47 per cent of the total variance. Item eight, "encouraging the use of pertinent instructional materials and aids", accounts for 4.44 per cent of the variance, and the other eight items account for the remaining 3.84 per cent of the variance measured in the analysis. The

TABLE XI

CORRELATIONAL MATRIX OF ITEMS ON PRINCE SCALE WITH TOTAL SCORES

	Items												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1.000	0.652	0.438	0.410	0.596	0.429	0.531	0.579	0.569	0.395	0.674	0.674	0.698	0.333
2		1.000	0.736	0.672	0.843	0.850	0.804	0.379	0.735	0.880	0.655	0.743	0.941	0.636
3			1.000	0.718	0.521	0.560	0.767	0.358	0.647	0.574	0.498	0.474	0.793	0.667
				1.000	0.624	0.566	0.786	0.525	0.602	0.572	0.576	0.297	0.786	0.645
					1.000	0.629	0.570	0.338	0.709	0.806	0.593	0.548	0.807	0.548
						1.000	0.736	0.334	0.631	0.815	0.582	0.708	0.805	0.502
							1.000	0.576	0.713	0.578	0.649	0.538	0.863	0.709
								1.000	0.482	0.251	0.093	0.355	0.551	0.207
									1.000	0.642	0.583	0.648	0.811	0.595
										1.000	0.576	0.777	0.830	0.484
											1.000	0.429	0.644	0.628
												1.000	0.732	0.443
													1.000	0.668
														1.000

1 - 10 Items on Prince Scale
11 Initiating Structure
12 Consideration
13 Overall rating on ten items of Prince Scale, Section A.
14 Scores on Section B of Prince Scale.

high intercorrelations found between the items and the high percentage of the variance accounted for by item two suggests that this item subsumes most of the information sought in the other variables.

TABLE XII

REGRESSION ANALYSIS OF ITEM SCORES ON THE PRINCE SCALE OF EFFECTIVENESS

Item	% of Variance
2	88.47
8	4.44
4	1.81
9	1.03
3	0.29
10	0.29
1	0.24
7	0.14
6	0.03
5	0.01
Total	96.75

Testing of Hypothesis III

This hypothesis stated:

> Those principals rated most effective by teachers will obtain scores above the mean for both dimensions of Initiating Structure and Consideration.

To test this hypothesis, those principals who obtained scores in the upper quartile were considered to be high in effectiveness, those who obtained scores in the lower quartile were considered to be lower in effectiveness. For each of these groups, the Consideration and Teacher estimate scores were plotted into four quadrants defined in each case by the means of the two leader behavior dimensions and the upper and lower quartile scores for the ratings of principal effectiveness. For each of these two by two tables a Chi Square, involving Yates correction for continuity was calculated.

Table XIII indicates the distribution of principals scoring in the upper and lower quartiles for the Prince Rating scale of Effectiveness, and above and below the mean of 44.73 on the Leader Behavior Description Questionnaire dimension of Initiating Structure. A Chi Square value calculated from this table was found to be 0.021. This was not significant at the 0.05 level.

Table XIV indicates the distribution of principals scoring in the upper and lower quartiles for the Prince Rating Scale of Effectiveness and above and below the mean

of 48.43 on the Leader Behavior Description Questionnaire dimension of Consideration.

TABLE XIII*

ABOVE AND BELOW MEAN SCORES ON INITIATING STRUCTURE AND UPPER AND LOWER QUARTILES ON EFFECTIVENESS

Teacher Estimates	Initiating Structure	
	Below X	Above X
Upper Quartile	4	4
Lower Quartile	9	7

* -- A Chi Square value of 3.84 required for significance at 0.05 level.

TABLE XIV*

ABOVE AND BELOW MEAN SCORES ON CONSIDERATION AND UPPER AND LOWER QUARTILES ON EFFECTIVENESS

Teacher Estimates	Consideration	
	Below X	Above X
Upper Quartile	1	7
Lower Quartile	5	3

* -- A Chi Square value of 3.84 required for significance at 0.05 level.

A Chi Square value calculated from this table was found to be 2.50. This was not significant at the 0.05 level.

Discussion. The above testing indicated that there was no significant relationship between scores obtained by those principals who were rated as most effective by teachers and above and below mean scores for each of the dimensions of Initiating Structure and Consideration. The findings indicated that ratings of principal effectiveness given by teachers did not increase in proportion to the scores which were given on each of the dimensions of Initiating Structure and Consideration. It would appear that in their rating of those principals whom they perceived to be the most effective, teachers took into account variables in addition to those of Initiating Structure and Consideration which were examined in this study. Reference to an analysis of the items on the Prince Rating Scale of Effectiveness indicates that item two, "helping teachers to solve their problems", and item eight, "encouraging the use of pertinent instructional materials and aids", account for over ninety-two per cent of the total variance. This would indicate that teachers favoured the principal who was willing to help them to solve the problems that they met in the classroom teaching and who could suggest materials and aids which were of assistance in their classroom teaching. The

results indicated that in their estimates of the most effective principals, teachers took into account behaviors other than those measured by the Leader Behavior Description Questionnaire.

Testing of Hypothesis IV

Hypothesis IV stated:

> Teacher ratings of principal effectiveness will correlate significantly with scores in Initiating Structure and Consideration but will be higher for Consideration.

Table XV lists teacher ratings of principal effectiveness and scores on the dimensions of Initiating Structure and Consideration.

A Pearson Product Moment Correlation calculated between teacher ratings of effectiveness and the scores on the dimension of Consideration gave a positive correlation of 0.559. This correlation was found to be significant at the 0.01 level.

A Pearson Product Moment Correlation calculated between teacher ratings of effectiveness and the scores on the dimension of Initiating Structure gave a positive correlation of 0.52. This correlation was found to be significant at the 0.01 level.

In order to establish the significance of the difference between the above correlation coefficients, a "t" value was calculated. This value was found to be 3.88 which was significant at the 0.05 level.

TABLE XV

TEACHER RATINGS OF EFFECTIVENESS AND SCORES ON INITIATING STRUCTURE AND CONSIDERATION

School	Teacher Ratings	Initiating Structure	Consideration
1	39.25	49.25	52.25
2	41.00	38.75	48.50
3	45.40	44.40	54.80
4	40.83	42.60	45.60
5	40.25	40.75	50.25
6	41.50	45.60	52.40
7	48.00	55.00	49.25
8	49.00	44.00	53.50
9	41.17	49.66	36.17
10	42.17	41.00	38.00
11	48.66	44.00	52.60
12	42.50	48.83	44.00
13	35.40	46.75	44.75
14	39.00	43.66	44.50
15	45.00	40.00	54.83
16	40.60	45.00	44.25
17	35.50	38.17	34.33
18	42.00	46.50	43.33
19	43.00	43.60	53.60
20	43.40	46.00	46.25
21	44.40	51.20	61.60
22	31.83	31.66	40.83
23	44.83	51.40	53.80
24	44.50	44.00	52.83
25	42.00	43.00	54.20
26	43.00	46.60	53.40
27	42.66	50.17	45.00
28	33.00	36.50	49.50
29	43.33	43.66	53.33
30	44.17	44.00	52.17
31	45.00	45.80	46.40
32	45.17	50.00	53.40

Discussion. The results indicated that, in their assessment of principal effectiveness, teachers take into account a wider range of leader behavior than did district superintendents. The results of testing for hypotheses one and two (supra pp. 48 - 54) showed that in their estimates of effectiveness, district superintendents placed an almost total dependence up Initiating Structure behavior and paid no regard to those behaviors associated with the dimension of Consideration. That is to say, that superintendents rate as effective those principals whom they perceive to be fulfilling the institutionally established requirements of their role. Teachers, however, in their assessment, perceived Initiating Structure and Consideration behaviors, to be behaviors, the adequate fulfillment of which are necessary for the effective principal. In addition, teachers placed a greater emphasis upon Consideration, as was evidenced by the fact that the correlation between teacher ratings and scores on the dimension of Consideration was significantly higher than that with scores on the dimension of Initiating Structure. It would appear that teachers prefer a principal whose behavior they perceive to be strongly directed towards their comfort, well being and status and who recognizes and encourages the contributions that they make.

The principal of any school will be confronted by at least two sets of obligations: to the Department of Education

and to the members of his school staff. Initiating Structure, viewed as a measure of the degree to which a principal fulfills the institutionally established requirements of his role, would be expected to be those behaviors which would gain approval of Departmental officers. The dimension of consideration can be viewed as a measure of the degree to which the principal is responsive to his staff in terms of their interpersonal needs.

The results of the above testing showed that teacher estimates of principal effectiveness correlated significantly, at the 0.05 level, with scores on each of the dimensions of Initiating Structure and Consideration. It was further demonstrated that the correlation between scores attributed to principals on the dimension of Consideration and teacher estimates of effectiveness was significantly higher than that between scores on the dimension of Initiating Structure and teacher estimates of effectiveness. The implication is, therefore, that while teachers prefer a principal who will further the goals of the group, they will prefer a principal whose behavior is related essentially to the maintenance or strengthening of the group itself.

The testing of hypothesis three showed that there was no significant relationship between the scores gained by principals rated as most effective by teachers and above mean scores on each of the dimensions of Initiating Structure and

Consideration. It would appear, therefore, that in addition to the dimensions of Initiating Structure and Consideration, teachers take into account behaviors other than those measured by these two dimensions. An analysis of the item scores on the Prince Rating Scale of Effectiveness indicated that these behaviors could be related to the degree to which the principal encouraged the use of pertinent instructional materials and aids and to the degree to which he helped teachers to solve their problems.

IV. THE RELATIONSHIP BETWEEN TEACHER ESTIMATES AND SUPERINTENDENT RATINGS OF EFFECTIVENESS

As the leader of a primary group within the framework of a large hierarchical organization, the Western Australian elementary school principal will be confronted by a double set of behavioral expectations -- by the superintendent, as the representative of the Education Department, and by the members of his school staff. The expectations in each case are not necessarily the same. In the assessment of the effectiveness of a principal both groups will place emphasis upon different aspects of leader behavior. In a system such as the Western Australian Education Department where promotion is by a progression from schools of smaller to schools of larger size and where seniority is one of the variables affecting promotion, there is a frequent interchangeability of the incumbents of any given principalship. As mentioned

above (supra p. 64) Initiating Structure can be viewed as one measure of the degree to which a principal is successful in fulfilling Departmental expectations of his role. This being the case it would seem logical that district superintendents would tend to rate as most effective those principals who showed a high degree of Initiating Structure behavior. In the testing of hypothesis two it was shown (supra. p. 53) that superintendents' ratings of principal effectiveness correlated highly with the dimension scores of Initiating Structure but not with the scores on the dimension of Consideration. On the whole, therefore, principals who were perceived by their staff as being high in Initiating Structure were also those who were rated high by the superintendents.

In addition to the obligations to the Department, the principal is confronted by obligations to his staff members. His responsibility to his staff will be in terms of their interpersonal relations. The scores on the dimension of Consideration, therefore, can be viewed as a measure of the degree to which the principal is responsive to his staff in terms of their interpersonal needs. The results of testing of hypothesis four (supra. p. 63) showed that teacher estimates of effectiveness correlated significantly with scores on both of the dimensions of Initiating Structure and Consideration but that the correlation for the dimension of Consideration was the higher.

The dimensions of Initiating Structure and Consideration, therefore, serve two different sets of objectives. Consideration may be viewed as behavior which is aimed essentially at strengthening or maintaining the staff as a cohesive group. Initiating Structure would be behavior whose principal focus is directed towards the achievement of formal group goals. The goals of group achievement and group maintenance may be viewed as integral aspects of the behavior of an effective principal. Whereas superintendents and teachers may place varying emphases upon these two aspects of behavior it may be concluded that in an assessment of effectiveness, high scores on both dimensions may be expected to be associated with the highly effective principal.

Hypotheses V, therefore, sought to establish whether there was any congruence between teacher and superintendent ratings of principal effectiveness. A Spearman coefficient of Rank Correlation was used to determine the relationship between the two variables.

Testing of Hypothesis V

This hypothesis stated:

> There will be a significant relationship between teacher estimates of principal effectiveness and the numerical assessment of principal effectiveness given by district superintendents.

Table XVI lists teacher and superintendent ratings of effectiveness for schools in the sample.

TABLE XVI

TEACHING MARKS AND TEACHER RATINGS OF PRINCIPAL EFFECTIVENESS

School	Teaching Mark	Teacher Estimate
1	88	39.25
2	88	41.00
3	88	45.40
4	88	40.83
5	86	40.25
6	87	41.50
7	88	48.00
8	89	49.00
9	89	41.17
10	89	42.17
11	89	48.66
12	89	42.50
13	89	35.40
14	89	39.00
15	89	45.00
16	89	40.60
17	89	35.50
18	89	42.00
19	89	43.00
20	89	43.40
21	89	44.40
22	88	31.83
23	89	44.83
24	88	44.50
25	89	42.00
26	89	43.00
27	89	42.66
28	88	33.00
29	88	43.33
30	88	44.17
31	89	45.00
32	89	45.17

A Spearman coefficient of rank correlation calculated between teacher ratings of effectiveness and the superintendents' numerical assessments gave a positive correlation of 0.301. On a test of significance this gave a "t" value of 1.73 which was significant at the 0.05 level.

It may be concluded that there was a significant positive relationship between teacher ratings and superintendent ratings of principal effectiveness, at the 0.05 level, for principals in the sample.

Discussion. The above testing showed that for this sample of Western Australian schools the teacher ratings of principal effectiveness correlated significantly with superintendents' ratings of effectiveness. In a majority of cases teachers and superintendents will agree on their estimates of a principal's effectiveness. Testing of previous hypotheses showed that in their estimates of effectiveness, teachers and superintendents will place emphasis on different dimensions of a principal's leader behavior. Teacher estimates of principal effectiveness correlated significantly with scores on both of the dimensions of Initiating Structure and Consideration but superintendent teaching marks showed a significant positive correlation only with scores on the dimension of Initiating Structure. The results of the testing of this and previous hypotheses does tend to suggest that, in their assessment of effectiveness, both teachers and superintendents

take into account variables other than those of Initiating Structure and Consideration. The design of this study does not permit any accurate indication of what these variables might be.

V. TESTING FOR CURVILINEARITY

Tests for curvilinearity were carried out with the superintendent's teaching marks, teachers' estimates of principal effectiveness and scores on each of the dimensions of Initiating Structure and Consideration.

In the testing of the hypotheses for the thesis, the results showed a significant positive correlation between superintendents' teaching marks and the dimension scores on Initiating Structure. In the case of teacher estimates of effectiveness a significant relationship was established with scores on each of the leader behavior dimensions. The testing, however, did not establish whether or not teacher and superintendent ratings would be increased or decreased in proportion to increases in the amount of Initiating Structure and Consideration behavior of the principal. Tests were carried out, therefore, to establish whether the relationships between teaching marks and scores on Initiating Structure and Consideration, and teacher estimates and scores on Initiating Structure and Consideration showed any tendency towards curvilinearity.

The procedure adopted to test for curvilinearity was a particular application of the procedure suggested by Bottenberg and Ward for the application of a second degree polynomial form in tests of theory.[1] The application of a second degree polynomial has been found to be appropriate wherever an investigator believes that the curvilinear form could possibly best describe the set of specific values found in testing.

In order to test for curvilinearity, twelve models were generated for each of the variables in the study. For each of the variables a full model of the form $y = A + BX + CX^2$, and a restricted model of the form $y = A + BX$, were constructed and a comparison made between each of these models. For the purposes of the analysis the variables were numbered as follows:

Teaching Marks	1
Teacher Estimates A	2
Teacher Estimates B	3
Initiating Structure	4
Consideration	5

Three variables, representing the curvilinearities, and which are necessary for the generation of the full models, were

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[1]R. A. Bottenberg, and J. H. Ward, Applied Multiple Linear Regression (Texas: Air Force Systems Command, 1963), p. 25.

generated for testing as follows:

X(6) = X(1)*X(1)

X(7) = X(2)*X(2)

X(8) = X(3)*X(3)

Table XVII indicates the models generated for testing.

With the use of a computer comparisons were made between the squared multiple correlations for the following models:

01 vs 02

03 vs 04

05 vs 06

07 vs 08

09 vs 10

11 vs 12

Table XVIII represents the results of an analysis of comparisons between each of the above models. In the case of models 01 and 02, 03 and 04, and 11 and 12, the probability was above .8. For models 05 and 06, 07 and 08, and 09 and 10 the probability was above 0.05 which indicates that there was some indication of curvilinearity but that the results could just as easily have fitted a straight line.

It must be concluded, therefore, that the relationships between teaching mark, and scores on the dimensions of Initiating Structure and that between Teacher Estimates and the scores on the dimensions of Initiating Structure and Consideration are linear and that no significant curvilinear relationships exist between the variables.

TABLE XVII

MODELS GENERATED FOR TESTING OF CURVILINEARITY

Model	Predictor*	Criterion*
01	1 and 6	4
02	1	4
03	1 and 6	5
04	1	5
05	2 and 7	4
06	2	4
07	2 and 7	5
08	2	5
09	3 and 8	4
10	3	4
11	3 and 8	5
12	3	5

* -- 1 = Teaching Mark

2 = Teaching estimates of effectiveness

3 = Teacher estimates of effectiveness (global)

4 = Initiating Structure

5 = Consideration

TABLE XVIII

RESULTS OF ANALYSIS BETWEEN MODELS

Models	R^2 Full	R^2 Restricted	F	df	p
01 vs 02	.137	.136	.033	1/29	.80
03 vs 04	.016	.016	.011	1/29	.90
05 vs 06	.378	.312	3.087	1/29	.08
07 vs 08	.277	.271	.252	1/29	.05
09 vs 10	.394	.319	3.601	1/29	.06
11 vs 12	.186	.185	.019	1/29	.89

CHAPTER V

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

I. SUMMARY OF THE STUDY

Introduction and Purpose

This study was an attempt to discover whether the leader behavior of elementary school principals in Western Australian schools was related to the numerical assessment of effectiveness given by district superintendents and to estimates of effectiveness given by members of the teaching staffs. As instrumental leader within the school, the principal must seek the achievement of its educational goals and at the same time maintain dynamic and harmonious relationships with and between staff members to ensure high levels of teacher satisfaction and morale. In large measure, his effectiveness will be determined by the degree to which he can achieve these.

The position of principal will involve a great measure of responsibility and a corresponding degree of skill in the human, technical, managerial and speculative-creative aspects of teaching and learning. The ability to ascertain the necessary skills for an effective principal and to describe the behavior that characterizes a successful school principal are most necessary. Chapter II of the study discussed only a few of the numerous studies that have been carried out in connection with leader behavior. These signify the importance

of the problem.

The Data

One hundred and seventy-four teachers and thirty-two principals from thirty-two schools in the metropolitan and sub-metropolitan areas of Perth, Western Australia participated in the study. Teachers were asked to complete questionnaires in which they rated the effectiveness of their principal. They also completed Leader Behavior Description Questionnaires on which they described his leader behavior. Measures of principal effectiveness were also obtained by use of the superintendents' numerical ratings, these ratings being obtained from each school principal. Relationships between the teacher measures of effectiveness and the dimension scores of Initiating Structure and Consideration obtained from the Leader Behavior Description Questionnaires were obtained by use of the Pearson Product-Moment Correlation Coefficient. Relationships between superintendents' ratings of effectiveness and the scores on the dimensions of Initiating Structure and Consideration were obtained by use of the Spearman Coefficient of rank correlation. A Chi Square, involving Yates correction for continuity, was used to determine the relationships between those principals rated most effective by teachers and superintendents, and above mean scores on Initiating Structure and Consideration.

II. CONCLUSIONS

Introduction

This section will state the hypotheses separately and discuss the findings in relation to the hypotheses. The inferences drawn from these findings will be contained in the section entitled "Implications."

Hypothesis I

The first hypothesis predicted that those principals rated most effective by superintendents would obtain scores above the means for both dimensions of Initiating Structure and Consideration of the Leader Behavior Description Questionnaire. The hypothesis was supported in one aspect only. There was a significant relationship at the 0.05 level, between scores above and below the mean on the dimension of Initiating Structure and higher and lower ratings of effectiveness as indicated by the superintendents' numerical ratings. In the case of the scores on the dimension of Consideration, no significant relationship was found.

Hypothesis II

This hypothesis predicted that superintendent ratings of principal effectiveness would correlate significantly with scores on Initiating Structure and Consideration, but would be higher for Initiating Structure.

This hypothesis was supported in two aspects only.

Testing showed that superintendents' ratings correlated significantly with the scores on the dimension of Initiating Structure but not with the scores on the dimension of Consideration. The correlation between superintendents' ratings and the scores on the dimension of Consideration was in a negative direction.

Hypothesis III

Hypothesis III proposed that principals rated most effective by teachers would be those scoring above the means on both leader behavior dimensions of Initiating Structure and Consideration. No significant relationships were found in the testing of this hypothesis.

Hypothesis IV

This hypothesis stated that teachers' ratings of principal effectiveness would correlate significantly with scores on Initiating Structure and Consideration but would be higher for Consideration. This hypothesis was confirmed. A correlation, significant at the 0.01 level was found between teacher ratings of effectiveness and the scores on the dimension of Initiating Structure. A correlation, significant at the 0.01 level was also found between teacher ratings of principal effectiveness and scores on the dimension of consideration. The significantly higher correlation between teacher ratings and scores on the dimension of Consideration, however, demonstrated that teachers

in this sample will prefer a principal whose behavior is related essentially to the maintenance or strengthening of the group.

Hypothesis V

The final hypothesis predicted that there would be a significant relationship between teacher estimates of principal effectiveness and the numerical assessments of effectiveness given to principals by district superintendents.

The hypothesis was confirmed. The teacher ratings of principal effectiveness correlated significantly, at the 0.05 level, with superintendent ratings.

Summary

In summary, then, it was found that superintendent ratings of effectiveness of a principal were correlated significantly with Initiating Structure scores but not with Consideration scores. Ratings by staff members correlated significantly with scores on both dimensions and the correlation with Consideration scores was found to be significantly higher than that with Initiating Structure scores. Both dimensions are integral components of a leader's behavior but in evaluating a principal's performance, the superintendent and the staff member each selectively perceives one dimension as more important than the other. For staff members, high Initiating Structure and Consideration

behavior are required for the effective principal. For the superintendent, a high degree of Initiating Structure behavior is required. In his assessment of effectiveness the superintendent does not appear to take into account the Consideration behavior of the principal.

The lack of an established relationship between the scores obtained by principals rated as most effective by teachers and those scoring above the means on both of the dimensions of Initiating Structure and Consideration may seem somewhat contradictory in view of the relationship established in hypothesis four. The lack of significance was due, in all probability, to the very small numbers of principals used in the analysis. Had a larger sample been obtained for the analysis, it is highly probable that the results obtained in hypothesis three would have reached the level required for significance.

III. IMPLICATIONS

Role behavior in education has been the object of many studies in educational administration. It is hoped that this study will make some small contribution to the task of identifying leader behavior traits of principals as they relate to effectiveness.

The findings of this study have several implications for educational administrators. Perhaps the conclusions have their greatest implication for principals as they were

the subjects under investigation. The results might also be of value to district superintendents in their task of evaluating principal effectiveness.

The results of testing have shown, that for this sample of Western Australian elementary school principals, superintendents rate as most effective those principals who show high Initiating Structure behavior but that in their assessment of effectiveness they place no emphasis upon Consideration behavior. Teachers, however, rate as most effective those principals who show a high degree of both behaviors. This then, highlights an inherent conflict in the role expectations of teachers and superintendents for the position of the principalship. A knowledge of these conflicting expectations by teachers and superintendents would lead to a deeper appreciation of the tasks facing the school principal and could lead to a more tolerant attitude by both groups.

The findings could be of value to the superintendent in his assessment of the effectiveness of the school principal. Realizing that the teaching mark places an almost total emphasis upon behaviors that are directed towards the achievement of formal group goals, he may be able to broaden his assessment to include those behaviors associated with the dimension of Consideration. This could lead to a greater satisfaction on the part of the school staff and thus indirectly to the achievement of those behaviors which the numerical assessment measures.

By realizing that high Initiating Structure and Consideration behaviors are characteristic of the effective leader and by evaluating themselves in terms of these dimensions, principals might improve the quality of their own leadership. This could lead to a higher level of satisfaction within the school staff and a more pleasant climate within the school.

Finally, the findings could be of value in any re-evaluation of the present numerical form of assessment in Western Australia and could provide some evidence for the formulation of alternatives to the present system of assessment of principal effectiveness.

IV. RECOMMENDATIONS

This study has pointed out the relationship between leader behavior of principals and ratings of effectiveness given by teachers and superintendents. A comparison of sample and population data showed that the sample is representative of the population beyond the 0.01 level of significance. It would be reasonable, therefore, to generalize from the results to all elementary school principals in Western Australia. The conclusions reveal the following possibilities for research:

(1) Only two broad behavior dimensions, Consideration and Initiating Structure were used in this study.

Additional items might be discovered which could be classified under Initiating Structure or Consideration. A similar study using the more recent L.B.D.Q. 12 might prove useful.

(2) The present study has sampled teachers from the metropolitan and sub-metropolitan areas of Perth, Western Australia. A similar study to this one, carried out with a much wider sample including rural areas, would give a greater spread of effectiveness ratings. In addition such a study might also be attempted in a series of high schools.

(3) A study relating principal leader behavior and estimates of effectiveness to pupil productivity might prove useful.

(4) It is recommended that a study of the relationship between teacher satisfaction, teacher morale and principal effectiveness be carried out.

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APPENDIX

Department of Educational
Administration,
University of Alberta,
Edmonton, Alberta, Canada.

March, 1966

The Principal,
State School.

Dear Sir:

May I solicit your help with a research study that I am undertaking as part of my Masters programme in the Department of Educational Administration at the University of Alberta?

The study attempts to discover the relationship between Leader Behavior and effectiveness and involves the answering of short questionnaires by yourself and by members of your staff.

Permission to carry out this study has been obtained from the Director General of Education and you are assured of complete anonymity in the analysis of data and the reporting of findings.

In order to distribute these materials I have enlisted the aid of my father, Mr. A. P. Stewart of Fremantle, who will collect the return envelopes, and send them unopened to me in Canada.

I would be most grateful for your assistance in the research and would appreciate an early return of the questionnaires.

Yours sincerely,

Neil Stewart

NS:peb

INSTRUCTION SHEET

(1) The Envelope contains the following materials:

1 Return envelope

1 Principal Questionnaire and envelope

6 Teacher Behavior Description Questionnaires and envelopes

6 Teacher questionnaires

(2) It is desirable that six teachers each fill in the leader behavior, and teacher questionnaires. If 6 are not available then as many as possible should complete the forms.

On completion of questionnaires seal in envelopes - no names are necessary.

Please write the name of the school on the envelope to avoid confusion in punching of data.

(3) Principal Questionnaires should be sealed in envelope, when completed. No name is necessary.

(4) Place all completed questionnaires in return envelope and mail.

TEACHER QUESTIONNAIRE

Would you please complete the following questions and enclose this form with your completed Leader Behavior Description Questionnaire.

IDENTIFICATION: Please write the name and address of your school on the envelope provided for the completed questionnaire. Do not write your name on this questionnaire.

Each questionnaire will be given a code number and all responses transferred to I.B.M. cards for processing. Complete anonymity in the analysis of data and the reporting of findings is assured.

1. How long have you been at your present school, including the present year? _____years

2. How many years of teaching experience do you have, including the present year? _____years

3. What academic qualifications do you hold? Please check the following list.

Teachers' Certificate	_____
Teachers' Higher Certificate	_____
Bachelor of Arts	_____
Bachelor of Education	_____
Other 1st degree	_____
Postgraduate degree	_____
Diploma of Education	_____
Other (Specify)	_____

EFFECTIVENESS RATING SCALE

The letters A, B, C, D, and E represent a range of effectiveness from very effective to ineffective. Please circle the letter which best represents your judgement of the effectiveness of your principal in the area represented.

A. How effective is your principal in:

1. Working with parents and community groups? A B C D E
2. Helping teachers to solve their problems? A B C D E
3. Handling discipline cases and helping students to solve their problems? A B C D E
4. Supervising the instructional programme? A B C D E
5. Communicating between Department, staff, and community? A B C D E
6. Conducting faculty meetings? A B C D E
7. Identifying, developing, and defining school goals? A B C D E
8. Encouraging the use of pertinent instructional materials and aids? A B C D E
9. Stimulating interest in professionalism among teachers? A B C D E
10. Showing an awareness of the importance of interpersonal staff relations? A B C D E

B. Please choose the ONE statement which best indicates your judgement of the effectiveness of your principal.

1. It is difficult to imagine a more effective principal. _____
2. I consider this principal to be among the more effective principals. _____

3. The effectiveness of this principal is only slightly better than that of an average principal. _____

4. The effectiveness of this principal is really a little below that of an average principal. _____

5. I consider this principal to be among the less effective principals. _____

PRINCIPAL QUESTIONNAIRE

Would you please indicate your answer to the following questions in the spaces provided?

IDENTIFICATION: Please write the name and address of your school on the envelope provided for the complete questionnaire; do not write your name on this questionnaire.

Each questionnaire will be given a code number and all responses transferred to I.B.M. cards for processing. Complete anonymity of the analysis of data and the reporting of findings is assured.

1. What is the grade of your school? Please tick appropriate title.
   Class 1A _____
   Class 1 _____
   Class 2 _____

2. How long have you been in your present school, including this year? _____ years

3. How many years of teaching experience do you have, including the present year? _____ years

4. What is your present teaching mark? (To nearest whole mark) _____

5. What are your present qualifications?
   (a) Teachers Certificate _____
   (b) Teachers' Higher Certificate _____
   (c) First Degree (State type) _____
   _____
   (d) Postgraduate degree (State type) _____
   _____
   (e) Diplomas _____
   _____
   (f) Other (Specify) _____
   _____

LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

Developed by staff members of
The Ohio State Leadership Studies

Name of Leader Being Described _____

Name of Group Which He Leads _____

Your Name _____

On the following pages is a list of items that may be used to describe the behavior of your supervisor. Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. This is not a test of ability. It simply asks you to describe, as accurately as you can, the behavior of your supervisor.

Note: The term, "group," as employed in the following items, refers to a department, division, or other unit of organization which is supervised by the person being described.

The term "members," refers to all the people in the unit of organization which is supervised by the person being described.

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The Ohio State University
Columbus, Ohio

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Directions:

(a) READ each item carefully.
(b) THINK about how frequently the leader engages in the behavior described by the item.
(c) DECIDE whether he always, often, occasionally, seldom or never acts as described by the item.
(d) DRAW A CIRCLE around one of the five letters following the item to show the answer you have selected.

A -- Always
B -- Often
C -- Occasionally
D -- Seldom
E -- Never

1.	He does personal favors for group members.	A B C D E
2.	He makes his attitudes clear to the group.	A B C D E
3.	He does little things to make it pleasant to be a member of the group.	A B C D E
4.	He tries out his new ideas with the group.	A B C D E
5.	He acts as the real leader of the group.	A B C D E
6.	He is easy to understand.	A B C D E
7.	He rules with an iron hand.	A B C D E
8.	He finds time to listen to group members.	A B C D E
9.	He criticizes poor work.	A B C D E
10.	He gives advance notice of changes.	A B C D E
11.	He speaks in a manner not to be questioned.	A B C D E
12.	He keeps to himself.	A B C D E
13.	He looks out for the personal welfare of individual group members.	A B C D E
14.	He assigns group members to particular tasks.	A B C D E
15.	He is the spokesman of the group.	A B C D E

16.	He schedules the work to be done.	A B C D E
17.	He maintains definite standards of performance.	A B C D E
18.	He refuses to explain his actions.	A B C D E
19.	He keeps the group informed.	A B C D E
20.	He acts without consulting the group.	A B C D E
21.	He backs up the members in their actions.	A B C D E
22.	He emphasizes the meeting of deadlines.	A B C D E
23.	He treats all group members as his equals.	A B C D E
24.	He encourages the use of uniform procedures.	A B C D E
25.	He gets what he asks for from his superiors.	A B C D E
26.	He is willing to make changes.	A B C D E
27.	He makes sure that his part in the organization is understodd by group members.	A B C D E
28.	He is friendly and approachable.	A B C D E
29.	He asks that group members follow standard rules and regulations.	A B C D E
30.	He fails to take necessary action.	A B C D E
31.	He makes group members feel at ease when talking with them.	A B C D E
32.	He lets group members know what is expected of them.	A B C D E
33.	He speaks as the representative of the group.	A B C D E
34.	He puts suggestions made by the group into operation.	A B C D E
35.	He sees to it that group members are working up to capacity.	A B C D E

36. He lets other people take away his leadership in the group. A B C D E

37. He gets his superiors to act for the welfare of the group members. A B C D E

38. He gets group approval in important matters before going ahead. A B C D E

39. He sees to it that the work of group members is coordinated. A B C D E

40. He keeps the group working together as a team. A B C D E

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